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PATENT

Docket No.: 19226/2291 (R-5824, R-5875, R-5881)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Lucey et al.

Serial No. : 10/804,629

Cnfrm. No. : 7869

Filed : March 19, 2004

For : PROCESS FOR PRODUCING
SEMICONDUCTOR NANOCRYSTAL CORES,
CORE-SHELL, CORE-BUFFER-SHELL AND
MULTIPLE LAYER SYSTEMS IN A NON-
COORDINATING SOLVENT UTILIZING *IN*
SITU SURFACTANT GENERATION

Examiner:
To Be Assigned

Art Unit:
1621

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.97-1.98

Mail Stop Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR §§ 1.97-1.98, applicants hereby bring to the attention of the United States Patent and Trademark Office, the enclosed references listed on the attached PTO-1449 form.

Pursuant to 37 CFR § 1.97(b)(3), no fee is required. Should it be determined that a fee is required, however, the Commissioner is authorized to charge that fee to Deposit Account No. 14-1138.

Respectfully submitted,

Date: September 14, 2004

Michael L. Goldman
Registration No. 30,727

NIXON PEABODY LLP
Clinton Square, P.O. Box 31051
Rochester, New York 14603-1051
Telephone: (585) 263-1304
Facsimile: (585) 263-1600

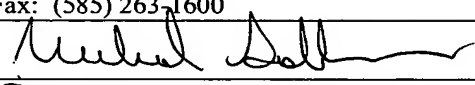
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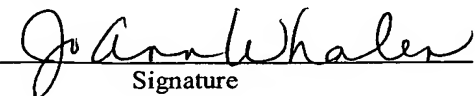
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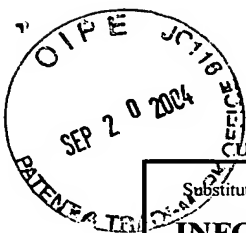


TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>		Application Number	10/804,629
		Filing Date	March 19, 2004
		First Named Inventor	Lucey et al.
		Group Art Unit	1621
		Examiner Name	To be Assigned
Total Number of Pages in This Submission	5 and cited references	Attorney Docket Number	19226/2291 (R-5824, R-5875, R-5881)

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> A copy of the Notice to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Declaration and Power of Attorney <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Application Data Sheet <input type="checkbox"/> Request for Corrected Filing Receipt with Enclosures <input checked="" type="checkbox"/> A self-addressed, prepaid postcard for acknowledging receipt <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO 1449 Form (3 pages) and 24 references
Remarks		<input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees required or credit any overpayments to Deposit Account No. 14-1138 for the above identified docket number.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Michael L. Goldman, Esq. Nixon Peabody LLP Clinton Square, P.O. Box 31051 Rochester, New York 14603-1051 Telephone: (585) 263-1304 Fax: (585) 263-1600
Signature	 Registration No. 30,727
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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/804,629
				Filing Date	March 19, 2004
				First Named Inventor	Lucey et al.
				Art Unit	1621
Sheet	1	of	3	Examiner Name	To Be Assigned
				Attorney Docket Number	19226/2291 (R-5824, R-5875, R-5881)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
	1	US-2003/0097976	05/29/2003	Zehnder et al.	
	2	US-5,474,591	12/12/1995	Wells et al.	
	3	US-5,505,928	04/09/1996	Alivisatos et al.	
	4	US-6,126,740	10/03/2000	Shultz et al.	
	5	US-6,207,229	03/27/2001	Bawendi et al.	
	6	US-6,225,198	05/01/2001	Alivisatos et al.	
	7	US-6,306,736	10/23/2001	Alivisatos et al.	
	8	US-6,576,291	06/10/2003	Bawendi et al.	
	9	US-6,607,829	08/19/2003	Bawendi et al.	
	10	US-6,682,596	01/27/2004	Zehnder et al.	
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FOREIGN PATENT DOCUMENTS						
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		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
	11	WO 02/25745	03/28/2002	WIPO		
	12	WO 02/29140	04/11/2002	WIPO		
	13	WO 03/012006	02/13/2003	WIPO		

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Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/804,629
				Filing Date	March 19, 2004
				First Named Inventor	Lucey et al.
				Group Art Unit	1621
Examiner Name	To Be Assigned				
Sheet	2	of	3	Attorney Docket Number	19226/2291 (R-5824, R-5875, R-5881)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	14	Li et al., "Large-Scale Synthesis of Nearly Monodisperse CdSe/CdS Core/Shell Nanocrystals Using Air-Stable Reagents via Successive Ion Layer Adsorption and Reaction," <i>J. Am. Chem. Soc.</i> , 125:12567-12575 (2003)	
	15	Borchert et al., "Investigation of ZnS Passivated InP Nanocrystals by XPS," <i>Nano Lett.</i> , 2:151-154 (2002)	
	16	Haubold et al., "Strongly Luminescent InP/ZnS Core-Shell Nanoparticles," <i>Chem. Phys. Chem.</i> , 5:331-334 (2001)	
	17	Mićić et al., "Core-Shell Quantum Dots of Lattice-Matched ZnCdSe ₂ Shells on InP Cores: Experiment and Theory," <i>J. Phys. Chem. B</i> , 104:12149-12156 (2000)	
	18	Beachley et al., "Chemistry of In(C ₅ H ₅) ₃ and Some Heteroleptic Organoinidium (III) Derivatives. Crystal and Molecular Structures of In(C ₅ H ₅) ₃ , (C ₅ H ₅) ₃ In·PPh ₃ , and (Me ₃ CCH ₂) ₂ In(C ₅ H ₅)," <i>Organometallics</i> , 21:4632-4640 (2002)	
	19	Battaglia et al., "Formation of High Quality InP and InAs Nanocrystals in a Noncoordinating Solvent," <i>Nano Lett.</i> , 2:1027-1030 (2002)	
	20	Coates, "Trimethylgallium. Part I. The Relative Stabilities of its Coordination Compounds with the Methyl Derivatives of Groups VB and VIB, and the Thermal Decomposition of Some Trimethylgallium-Amine Complexes," <i>J. Chem. Soc.</i> , pp.2003-2013 (1951)	
	21	Park et al., "Cis-Trans Isomerization and Structure of Dimeric [Me ₂ Ga(μ-NH ^t Bu)] ₂ ," <i>Organometallics</i> , 11:3320-3323 (1992)	
	22	Coates et al., "Trimethylgallium. Part III. Reaction with Diphenylphosphine and -arsine," <i>J. Chem. Soc.</i> , pp.233-237 (1963)	
	23	Waggoner et al., "Reactions of Trimethylaluminum or Trimethylgallium with Bulky Primary Amines: Structural Characterization of the Thermolysis Products," <i>J. Am. Chem. Soc.</i> , 113:3385-3393 (1991)	
	24	Beachley et al., "Room Temperature Cyclopentadiene Elimination Reaction for the Synthesis of Diethylgallium-Amides, -Phosphides, and -Thiolates. Crystal and Molecular Structures of [Et ₂ GaP(t-Bu) ₂] ₂ and [Et ₂ GaS(SiPh ₃) ₂] ₂ ," <i>Organometallics</i> , 15:3653-3658 (1996)	

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	25	Maury et al., "Raman Spectroscopy Characterization of Polycrystalline GaP Thin Films Grown By MO-CVD Process Using [Et ₂ Ga –PEt ₂] ₃ as Only Source," <i>J. Phys. (Paris)</i> , 43:CI-347-CI-352 (1982)	
	26	Maury et al., "Synthesis and Characterization of Diethylphosphino Ga(III) and In(III) Complexes with Covalent Metal-Phosphorus Bonds," <i>Polyhedron</i> , 3:581-584 (1984)	
	27	Storr et al., "Cyclic Imino Derivatives of Aluminium, Gallium, and Indium Dialkyls," <i>J. Chem. Soc.</i> , pp.3850-3854 (1971)	
	28	Storr, "Trimeric Methylaminogallane, (MeNHGaH ₂) ₃ and Related Compounds," <i>J. Chem. Soc.</i> , pp.2605-2608 (1968)	
	29	Beachley et al., "Use of Me ₂ Ga(C ₅ H ₅) To Prepare (Me ₂ GaERR') _n (E = N, P) at or Below Room Temperature and the Crystal and Molecular Structure of [Me ₂ GaP(Me)(Ph)] ₃ ," <i>Organometallics</i> , 12:1976-1980 (1993)	
	30	Beachley et al., "Cyclopentadiene Elimination Reaction as a Route to Bis(neopentyl)gallium Phosphides. Crystal and Molecular Structures of [(Me ₃ CCH ₂) ₂ and [(Me ₃ CCH ₂) ₂ GaP(C ₆ H ₁₁) ₂] ₂ ," <i>Organometallics</i> , 16:3267-3272 (1997)	
	31	Beachley et al., "Cyclopentadiene Elimination Reactions for the Preparation of Organoindium(III) Derivatives. Crystal and Molecular Structures of Me ₂ In(acac), (Me ₃ CCH ₂) ₂ In(acac), (Me)(Me ₃ CCH ₂)In(acac), and [Me ₂ InNH(t-Bu)] ₂ ," <i>Organometallics</i> , 22:3991-4000 (2003)	
	32	Beachley et al., "Chemistry of Indium(III) Tris(cyclopentadienide). Reactions with Diphenylphosphine, <i>tert</i> -Butyl Alcohol, and Acetylacetone. Cyclopentadiene and Reductive Elimination Reactions," <i>Organometallics</i> , 22:1690-1695 (2003)	
	33	Furis et al., "Spectroscopic Studies of InP Nanocrystals Synthesized Through a Fast Reaction," Proceedings of the MRS-Materials Research Symposium, (2003) (Abstract)	
	34	Cartwright et al., "Ultrafast Dynamics in Nanostructured Materials," Proceedings of SPIE-The International Society for Optical Engineering, 5222(Nanocrystals, and Organic and Hybrid Nanomaterials), 134-139 (2003) (Abstract)	

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